

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A semiconductor module comprising:

an insulating base material provided with a conductor circuit;

a semiconductor element formed on said insulating base material; and

an insulator disposed in contact with said insulating base material and said semiconductor element,

wherein said insulating base material is provided with minute projections on a surface thereof that is in contact with said insulator,

~~wherein the surface of said insulating base material provided with minute projections through plasma processing is in contact with said insulator,~~

said minute projections include a plurality of projections of 1 nm to 20 nm in average diameter[[,]] and formed in a number density of not less than $0.5 \times 10^3 \mu\text{m}^{-2}$

~~said insulting base material includes at least one of photopolymerizable thermosetting resin containing a polyfunctional oxetane compound or an epoxy compound, epoxy resin, BT resin, and liquid crystal polymer.~~

2. (Previously Presented) The semiconductor module as set forth in Claim 1, wherein said insulator is a sealing resin for sealing the semiconductor element therein.

3. (Original) The semiconductor module as set forth in Claim 1, wherein said insulator is an adhesive provided between said semiconductor element and said insulating base material.

4. (Original) The semiconductor module as set forth in Claim 1, wherein a plurality of crater-shaped recesses is formed on a surface of said insulating base material that is in contact with said insulator.

5. (Original) The semiconductor module as set forth in Claim 4, wherein a diameter of said crater-shaped recess is in a range of 0.1 μm to 1 μm .

6. (Cancelled)

7. (Cancelled)

8. (Withdrawn) A semiconductor module comprising:
an insulating base material provided with a conductor circuit;
a semiconductor element formed on said insulating base material; and
an insulator disposed in contact with said insulating base material and said semiconductor element;

wherein a value of y/x is not less than 0.4, where x represents a detected intensity at a binding energy of 284.5 eV and y represents a detected intensity at a binding energy of 286 eV,

by an X-ray photoelectric spectroscopy spectrum in the proximity of a surface of said insulating base material that is in contact with said insulator.

9. (Withdrawn) A semiconductor module comprising:
an insulating base material provided with a conductor circuit;
a semiconductor element formed on said insulating base material; and
an insulator disposed in contact with said insulating base material and said semiconductor element;
wherein an exposed region of said insulating base material in contact with said insulator makes a contact angle of 30 degrees to 120 degrees with respect to pure water.

10. (Withdrawn) A semiconductor module comprising:
an insulating base material provided with a conductor circuit;
a semiconductor element formed on said insulating base material; and
an insulator disposed in contact with said insulating base material and said semiconductor element;
wherein said insulating base material is constituted essentially of a photopolymerizable thermosetting resin containing a polyfunctional oxetane compound or an epoxy compound.

11. (Original) The semiconductor module as set forth in Claim 1, wherein said semiconductor element is a bare chip and said insulator is constituted essentially of a sealing resin for sealing said bare chip therein.

12. (Withdrawn) The semiconductor module as set forth in Claim 8, wherein said semiconductor element is a bare chip and said insulator is constituted essentially of a sealing resin for sealing said bare chip therein.

13. (Withdrawn) The semiconductor module as set forth in Claim 9, wherein said semiconductor element is a bare chip and said insulator is constituted essentially of a sealing resin for sealing said bare chip therein.

14. (Withdrawn) The semiconductor module as set forth in Claim 10, wherein said semiconductor element is a bare chip and said insulator is constituted essentially of a sealing resin for sealing said bare chip therein.

15. (Currently Amended) A module comprising:
a base material;
an element formed on said base material; and
an insulator disposed in contact with said base material and said element,
wherein said base material is provided with minute projections on a surface thereof that
is in contact with said insulator,

~~wherein the surface of said base material provided with minute projections through~~
~~plasma processing is in contact with said insulator,~~

said minute projections include a plurality of projections of 1 nm to 20 nm in average diameter[[,]] and formed in a number density of not less than $0.5 \times 10^3 \mu\text{m}^{-2}$

~~said base material includes at least one of photopolymerizable thermosetting resin containing a polyfunctional oxetane compound or an epoxy compound, epoxy resin, BT resin, and liquid crystal polymer.~~

16. (Original) The module as set forth in Claim 15, wherein a plurality of crater-shaped recesses is formed on a surface of said base material that is in contact with said insulator.

17. (Cancelled)

18. (Withdrawn) A method of manufacturing said semiconductor module set forth in Claim 1, comprising:

applying plasma processing with a plasma gas containing an inert gas to a surface of said insulating base material provided with a conductor circuit without applying a bias to said insulating base material; and

forming a semiconductor element and an insulator in contact with said semiconductor element on said insulating base material.

19. (Withdrawn) A method of manufacturing said semiconductor module set forth in Claim 8, comprising:

applying plasma processing with a plasma gas containing an inert gas to a surface of said insulating base material provided with a conductor circuit without applying a bias to said insulating base material; and

forming a semiconductor element and an insulator in contact with said semiconductor element on said insulating base material.

20. (Withdrawn) A method of manufacturing said semiconductor module set forth in Claim 9, comprising:

applying plasma processing with a plasma gas containing an inert gas to a surface of said insulating base material provided with a conductor circuit without applying a bias to said insulating base material; and

forming a semiconductor element and an insulator in contact with said semiconductor element on said insulating base material.

21. (Withdrawn) A method of manufacturing said semiconductor module set forth in Claim 10, comprising:

applying plasma processing with a plasma gas containing an inert gas to a surface of said insulating base material provided with a conductor circuit without applying a bias to said insulating base material; and

forming a semiconductor element and an insulator in contact with said semiconductor element on said insulating base material.

22. (Withdrawn) A method of manufacturing said module set forth in Claim 15, comprising:

applying plasma processing with a plasma gas containing an inert gas to a surface of said base material without applying a bias to said base material; and

forming an element and an insulator in contact with said element on said base material.

23. (Previously Presented) The semiconductor module according to claim 1, wherein the epoxy resin, the BT resin, and the liquid crystal polymer are thermosetting resins.

24. (Previously Presented) The module according to claim 15, wherein the epoxy resin, the BT resin, and the liquid crystal polymer are thermosetting resins.

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)